

EXHIBIT B

1 KAMBEREDELSON, LLC
2 ALAN HIMMELFARB
2757 Leonis Boulevard
3 Vernon, California 90058
Telephone: (323) 585-8696

4 Attorneys for Plaintiff
LINDSEY ABRAMS

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6
7 UNITED STATES DISTRICT COURT
8 NORTHERN DISTRICT OF CALIFORNIA
9 SAN JOSE DIVISION
10

11 LINDSEY ABRAMS, individually and on
12 behalf of a class of similarly situated
13 individuals,

14 Plaintiff,

15 v.

16 FACEBOOK, INC., a Delaware corporation,
17 Defendant.

Case No. C 07-05378 PVT

DECLARATION OF RANDALL A. SNYDER

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19 **DECLARATION OF RANDALL A. SNYDER**

20 I, Randall A. Snyder, hereby declare as follows:

21 **I. Professional Background**

- 22 1. My name is Randall A. Snyder. I am an independent mobile telecommunications
23 technology consultant and reside at 8113 Bay Pines Avenue, Las Vegas, Nevada,
24 89128. I have been retained by the law firm of KamberEdelson, LLC to provide my
25 opinions on issues concerning mobile short message service (SMS) technology,
26

27
28 **DECLARATION OF RANDALL A. SNYDER**

1 commonly known as mobile text messaging, the use of this technology by Facebook,
2 Inc., and the matters at issue in the instant litigation.

3 2. I have over 24 years of experience in mobile telecommunications network and system
4 architecture, engineering, design and technology. I consider myself to be an expert in
5 the field of mobile and cellular telecommunications, mobile and cellular networking
6 technology and specifically short message service technology. A copy of my
7 *curriculum vitae* is attached to this declaration.

8
9 3. I have taught many classes and seminars on mobile telecommunication network
10 technologies and have been a panelist and speaker at numerous conferences at the
11 Institute of Electrical and Electronics Engineers (IEEE), the Personal Communication
12 Society (PCS), and the Cellular Telecommunications and Internet Association (CTIA)
13 as an expert in mobile telecommunication networks. I spent seven years developing
14 standards within the American National Standards Institute's subsidiary organization,
15 the Telecommunications Industry Association (TIA), providing technical
16 contributions and authoring and editing mobile telecommunications proposed
17 standards documents. Most notably, I authored and oversaw the standardization of
18 Interim Standard 93, providing interconnection technology between wireline and
19 mobile networks, which is now a fully accredited national standard of the American
20 National Standards Institute (ANSI). I am the author of the McGraw-Hill books
21 "Mobile Telecommunications Networking with IS-41," and "Wireless
22 Telecommunications Networking with ANSI-41, 2nd edition" published in 1997 and
23 2001, respectively. These books have sold several thousand copies and were required
24 reading for mobile engineers at AT&T Wireless and Motorola for several years. The
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1 latter book has also been relied upon and cited numerous times as a reference for
2 various Short Message Service (SMS) patents in the mobile industry, such as Method
3 and Apparatus for Routing Short Messages, US Patent #6308075, Method and
4 System for Wireless Instant Messaging, US Patent # 7058036 and Automatic In-Line
5 Messaging System, US Patent # 6718178. I have been granted several patents myself
6 on mobile networking technology and currently have three additional patent
7 applications filed in the area of Short Message Services for mobile technology. I have
8 also authored several articles on mobile telecommunications technology and have
9 been quoted numerous times in industry trade publications. I have consulted and been
10 employed for many mobile telecommunications companies including McCaw
11 Cellular, AirTouch, AT&T Wireless, Lucent, Nokia, Ericsson, Nextwave, MCI,
12 Sprint and other mobile technology vendors and service providers. I was a founder of
13 m-Qube, Inc. (acquired by Verisign, Inc. in 2006), which develops and markets
14 mobile text messaging services. I was also nominated in 2006 for a National
15 Television Arts Emmy Award for Outstanding Achievement in Advanced Media
16 Technology for unique mobile technology I designed while employed at Entriq, Inc.
17 Still more detail as well as details of publications that I have authored or co-authored
18 within at least the past 10 years are provided in my attached *curriculum vitae*.

21 **II. Overview of Facebook Mobile**

- 22 4. Facebook, Inc. provides an online application that employs what is commonly known
23 as internet-based social networking functionality. Within this online application,
24 Facebook provides a feature known as Facebook Mobile. Facebook Mobile enables
25 Facebook users to communicate with each other via mobile text messages. That is,
26

1 mobile text messages can be sent by online Facebook users to Facebook Mobile users
2 who have registered for such mobile capability. Similarly, mobile text messages can
3 be sent by Facebook Mobile users to other Facebook Mobile users.

- 4 5. Sending a mobile text message to a user via the Facebook application requires that the
5 message sender know the name or alias of another user with which they wish to
6 communicate. A mobile text message can only be sent to a user if that user has
7 registered a mobile telephone number within their personal profile of the Facebook
8 application. A text message is sent to a user from the Facebook application to mobile
9 telephone numbers within another user's profile. The message sender never actually
10 knows the mobile telephone number of the intended message recipient to successfully
11 send the text message. The Facebook application enables sending of mobile text
12 messages to mobile phones pseudonymously, if they wish, using only names created
13 within their profiles.
14

15 **III. Settlement Agreement**

- 16 6. The settlement agreement reached in this matter (i.e., the "Settlement Agreement")
17 requires Facebook to implement three main corrective actions: (1) brand each text
18 message sent out as originating from "Facebook"; (2) include specific opt-out
19 instructions in the body of every 15th text message Facebook sends to a particular
20 telephone number; and (3) undertake commercially reasonable measures in
21 cooperation with wireless carriers to prevent recycling of mobile telephone numbers.
22
23 7. Based on my experience and familiarity with the industry, I believe these steps will
24 reduce the amount of unauthorized charges to the class for the following reasons: (1)
25 the number of non-consenting recipients who will be confused as to the source of
26

1 Facebook's text messages, as occurred in the Plaintiff's case, will decrease and cause
2 opt-out rates to increase; (2) the increased frequency with which recipients of
3 Facebook Mobile text messages will receive opt-out instructions (approximately
4 twice per month) will cause opt-out rates to increase; (3) the medium through which
5 opt-out instructions will be communicated (i.e., a text message – the user's medium
6 of choice) will cause opt-out rates to increase; (4) the medium through which the act
7 of opting-out will be exercised as part of the Settlement Agreement's opt-out
8 instructions (i.e., a text message – again, the user's medium of choice) will cause opt-
9 out rates to increase; and (5) Facebook's enhanced coordination with the wireless
10 carriers as provided by the Settlement Agreement will mitigate the ill-effects of
11 recycled mobile telephone numbers.
12

13 **IV. Facebook Mobile Growth Rate**

14 8. It is my understanding that approximately 14 million mobile text messages were sent
15 to mobile phones via the Facebook Mobile application in January, 2007. Furthermore,
16 it is my understanding that approximately 59.9 million mobile text messages were
17 sent to mobile phones via the Facebook Mobile application in January, 2008 by
18 approximately 1.78 million Facebook Mobile users, per Facebook's estimation.
19 Therefore, each Facebook Mobile user received an average of 33.6 text messages in
20 January, 2008 via the Facebook Mobile application. Based on this and other figures
21 provided by Facebook, between January, 2007 and January, 2008, Facebook
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1 experienced an average month-to-month growth rate in text message volume of
2 12.9%.¹

3 9. Assuming this rapid growth rate is not sustainable based on both the waning novelty
4 of the Facebook Mobile application among users as well as a natural anticipated
5 decline in ongoing growth rates, I believe a conservative monthly growth rate through
6 mid-year 2010 in the range of 9% to 11% is reasonable. Although the terms of the
7 Settlement Agreement provide for a period of 27 months during which Facebook will
8 implement the corrective action, for purposes of my calculations in this declaration, I
9 have limited that period to 24 months as I assume opt-out rates will not materially
10 change from the status quo (as defined by Facebook's discovery responses) before the
11 fourth month of implementation. This assumption is based on the likelihood that the
12 opt-out rate will not increase above the status quo until the corrective action is
13 allowed to take root throughout the Facebook Mobile user base. Therefore, for the
14 purposes of this declaration, I assume that the corrective action will start in July, 2008
15 and end no sooner than June, 2010 (i.e., the "Settlement Period").
16

17
18 10. At this 9% to 11% monthly growth rate in the volume of mobile text messages sent to
19 mobile phones from the Facebook application, by June, 2010 a cumulative total of
20 between approximately 7.8 billion and 11.4 billion additional text messages will have
21 been sent. The following table shows the figures for 9% and 11% month-to-month
22 growth through June, 2010.
23

24
25 ¹ Comparatively, 48 billion text messages are sent nationwide each month, a 157% increase
26 from one year ago (Steve Largent, President and CEO, Cellular Telecommunications and
27 Internet Association, April 1, 2008 Keynote Address, *CTIA2008*, Las Vegas, NV).

MONTH	# TEXT MESSAGES (9% GROWTH PER MONTH)	# TEXT MESSAGES (11% GROWTH PER MONTH)
January 2008	59.9M (provided by Facebook)	59.9M (provided by Facebook)
February 2008	65.3M	66.5M
March 2008	71.2M	73.8M
April 2008	77.6M	81.9M
May 2008	84.6M	90.9M
June 2008	92.2M	100.9M
July 2008 (start corrective action)	100.5M	112M
August 2008	109.5M	124.3M
September 2008	119.4M	138M
October 2008	130.1M	153.2M
November 2008	141.8M	170.1M
December 2008	154.6M	188.8M
January 2009	168.5M	209.6M
February 2009	183.7M	232.7M
March 2009	200.2M	258.3M
April 2009	218.2M	286.7M
May 2009	237.8M	318.2M
June 2009	259.2M	353.2M
July 2009	282.5M	392.1M
August 2009	307.9M	435.2M
September 2009	335.6M	483.1M
October 2009	365.8M	536.2M
November 2009	398.7M	595.2M
December 2009	434.6M	660.7M
January 2010	473.7M	733.4M
February 2010	516.3M	814.1M
March 2010	562.7M	903.7M
April 2010	613.3M	1003.1M
May 2010	668.5M	1113.4M
June 2010 (end corrective action)	728.7M	1235.9M
TOTAL (April 2008 – June 2010)	7.8 Billion	11.4 Billion

11. Assuming the rate of messages received by Facebook Mobile users in January 2008 (i.e., 33.6 messages per month) remains the same throughout the Settlement Period, this analysis translates to between approximately 21.7 million and 36.7 million Facebook Mobile users in June, 2010. I believe this is a reasonable estimate for the growth rate of the Facebook Mobile application based on my knowledge of industry adoption rates for mobile data, user turnover as a result of the corrective action, attrition and text messaging services.

V. Text Message Cost

12. Based on my knowledge and experience in the wireless industry, as well as an understanding of the various wireless carrier plans, bundles and costs for ad hoc text messaging, it is my opinion that each of these messages can generate an approximate average fee of up to \$0.15 per message. AT&T Mobility, Verizon Wireless, Sprint Nextel and T-Mobile, the four largest domestic wireless carriers by market share, all charge individual text message fees of \$0.15 per message, according to their respective websites, and such amount may increase over the Settlement Period.² The various text message plans that each of these wireless carriers offers equate to text

² See text messaging rate plans for AT&T Mobility, LLC; Cellco Partnership d/b/a Verizon Wireless, Sprint-Nextel Corporation and T-Mobile USA, Inc., at:
https://www.wireless.att.com/media/multimedia_messaging_purchase,
<http://www.wireless.att.com/learn/messaging-internet/messaging/international.jsp>,
http://products.vzw.com/index.aspx?id=messaging_im,
http://b2b.vzw.com/international/Text_Messaging/index.html,
http://support.vzw.com/features/data_services/txt_messaging.html
http://nextelonline.nextel.com/en/services/messaging/textmessaging.shtml?id16=15_t
[ext_rate&id12=iSearch_MA_text,](http://www.t-mobile.com/shop/addons/services/MessagingDisclaimer.aspx)
<http://www.t-mobile.com/shop/addons/services/MessagingDisclaimer.aspx>,
http://www.tmobile.com/shop/addons/services/TzonesDetail.aspx?tp=Svc_Tab_TZones&tsp=Svc_Sub_Messaging&tssp=Svc_Sub_TextMessaging&oscid=4CD51BA7-B5AF-4AB2-85E0-50EC0AF141F9

1 message fees of \$0.10 per message as long ago as the Fall of 2005, according to a
2 study on the industry at that time published by researchers at Pennsylvania State
3 University.³ Similarly, the Plaintiff in this action states that she was charged \$0.10 by
4 her wireless provider, Verizon Wireless, for her receipt of each text message.⁴ These
5 fees are ordinarily charged for both sent and received messages and appear as line
6 item charges on one's cell phone bill. Therefore, I believe an average fee of between
7 \$0.10 and \$0.15 per text message both sent and received is reasonable.
8

9 **VI. Rate of Improper Charges**

10 13. There are several reasons why mobile subscribers may be subject to ongoing
11 improper charges for mobile text messages sent to them via the Facebook Mobile
12 application. Among these reasons are the recycling of mobile telephone numbers
13 wherein a mobile subscriber obtains a previously used mobile telephone number with
14 a new mobile subscription. The previous user of the mobile telephone number is a
15 registered user of the Facebook Mobile application and has not changed the mobile
16 telephone number registered in his or her Facebook Mobile profile. Therefore, I
17 believe it is reasonable that as much as 1% to 2.6% of the improper text message
18 charges may be attributable to mobile telephone number recycling, according to
19 statistics provided by the FCC.⁵
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21

22 ³ See *Exploiting Open Functionality in SMS-Capable Cellular Networks*, November 11,
23 2005, Alexandria, Virginia, USA. © 2005 ACM 1595932267, at:
<http://www.smsanalysis.org/smsanalysis.pdf>.

24 ⁴ Comp., ¶29

25 ⁵ See *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993*,
26 *Annual Report and Analysis of Competitive Market Conditions With Respect to*
27 *Commercial Mobile Services, Eleventh Report, 21 FCC Rcd 10947, ¶ 145 (Sept. 26,*
28 *2006)*. Cellular carriers estimated that 1.5% to 3% of their user base terminates cellular
service on a monthly basis in 2005. When a telephone subscriber terminates service and

1 14. Another reason is that some mobile subscribers are legitimately registered Facebook
2 Mobile users, but when they received text messages from other Facebook users, there
3 were – prior to the Settlement Agreement - no instructions delivered with the
4 messages that provided any indication of how to stop receiving them. In fact, if text
5 messages were sent by mobile subscribers in response to the received Facebook
6 Mobile text messages attempting to make them stop, they would be charged for the
7 response text messages and they would have no effect.

9 15. Furthermore, according to a 2006 survey by Silverpop Systems, Inc., a provider of
10 email marketing solutions, as many as 2% of subscribers to email marketing offers
11 choose to opt-out of receiving additional emails when given the opportunity to do so.⁶
12 It is reasonable to surmise that a similar percentage of subscribers to a text messaging
13 application would choose to opt-out as well if given the opportunity. According to a
14 September, 2007 study by M:Metrics, Inc., an international mobile media authority,
15 “The early days of SMS advertising are similar to the advent of email...”⁷ The
16 advertising referred to comprises applications that mobile subscribers have opted-in
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18
19 the subscriber’s number is disconnected, it must either be recycled or ported to a new
20 carrier by law. 47 C.F.R. § 52.15(f)(ii) (2007). In 2005, the combined national cellular
21 subscriber base totaled 207 millions subscribers. Id., Table 1. Thus, nationally, some 3.1
22 to 6.2 million cellular subscribers terminated their service per month in 2005. Of those
23 terminating cellular subscribers, only 887,000 of those subscribers took their phone
24 numbers with them by porting the number to a new carrier – and the remainder left their
number behind, to be recycled by the old carrier. Id., ¶ 147. Thus, it is reasonable to infer
that 2.2 to 5.4 million cellular subscribers left their numbers behind to be recycled by
their old carrier each month – or 1% to 2.6% of the national cellular subscriber base.)

25 ⁶ See 2006 Email List Growth Study, Silverpop Systems, Inc.; <http://www.silverpop.com>;
© 2007 Copyright Silverpop, Atlanta, GA.

26 ⁷ See Spain Has Largest Audience for SMS-Based Mobile Advertising.
M:Metrics; <http://www.mmetrics.com>; © 2007 Copyright M:Metrics, Inc., Seattle, WA.

1 to. I believe even a higher percentage of subscribers to a text messaging application,
2 like Facebook Mobile, would choose to opt-out. This is due to two primary factors:

- 3 1. Unlike email applications, mobile subscribers have to effectively pay for each
4 and every mobile text message received whether that be on a line item basis or
5 along with a bundled package.
- 6 2. Mobile subscribers are more apt to opt-out due to an ever-increasing volume
7 of receiving unwanted mobile spam and mobile advertisements. Mobile
8 subscribers tend to be more aware of each message received and they have no
9 mechanism available to them to personally filter SMS messages of certain
10 types, similar to the way email can be filtered through an email client
11 application like Microsoft's Internet Explorer.

13 16. Another reason is that some mobile subscribers are charged for Facebook Mobile text
14 messages sent to their mobile phones when their phones do not support text
15 messaging. Charges for these text messages appear on their phone bills although
16 messages were never received and in fact, the subscriber has no idea they were even
17 sent. And yet another reason is that a wrong mobile telephone number could have
18 been registered within the Facebook Mobile application, either intentionally or not,
19 causing undesired messages to be received by mobile subscribers.

21 17. While I believe the opt-out rate will be materially higher for these reasons than the
22 2% determined for commercial email, out of an abundance of caution, I limit my
23 estimate of the number of Facebook Mobile recipients who can be expected to
24 respond to the opt-out instructions sent at regular intervals in the body of the text
25 messages, as required by the Settlement Agreement, to 2%.

VII. Conclusion

18. I believe a reasonable estimate of 2.9% to 4.6% of the cost to recipients of text messages from Facebook (1% to 2.6% for number recycling and 2% for responding to the embedded opt-out instructions) over the Settlement Period may be improper charges, but for the corrective action taken by Facebook pursuant to the Settlement Agreement.

19. My opinions in this declaration are based upon extensive experience in the wireless industry, a detailed understanding of how mobile text messaging services operate, a detailed understanding of telephone number administration within the wireless industry and personal experience as a user of the Facebook Mobile application. If called to testify, I could and would testify competently about these opinions.

Pursuant to 28 USC § 1746, I declare under penalty of perjury that the foregoing is true and correct.

Executed on: May 7, 2008


Randall A. Snyder